PYSHKIN, I.V

S/121/61/000/004/008/008
D040/D113

AUTHOR: None given

TITLE: Dissertations

PERIODICAL: Stanki i instrument, no. 4, 1961, 44

TEXT: The following dissertations were presented for the degree of Candidate: A. Ya. Alyab'yev, at the Kiyevskiy ordena Lenina politekhnicheskiy institut (Kiyev "Order of Lenin" Polytechnic Institute), "Investigation of faults occurring in grinding of aircraft frame and aircraft engine parts, and development of measures to prevent them"; I. Z. Bass, at the Moskovskiy avtomekhanicheskiy institut (Moscow Automechanical Institute), "Investigation of the thread rolling process, and new rolling tool geometry"; Wang Ch'ih-hao, at the Moskovskiy stankoinstrumental'nyy institut im. I. V. Stalina (Moscow Institute of Machine Tools and Instruments im. I. V. Stalin), "Investigation of vibrations in a gear milling machine"; I. V. Pyshkin, at the Moskovskiy ordena Lenina energeticheskiy institut (Moscow 'Order of Lenin" Power Engineering Institute), "Problems of the theory and calculation of automatic control systems with pulse width modulation"; V. I. Zhukov, at the Moscow Institute of Machine Tools and instruments im. I. V.

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Dissertations

S/121/61/000/004/008/008
D040/D113

Stalin, "Investigation of the rigidity of frames of semiautomatic lathes"; Ch'en Pao-ting, at the Moskovskoye ordena Lenina i ordena Trudovogo Krasnogo Znameni vyssheye tekhnicheskoye uchilishche im. N. E. Baumana (Moscow "Order of Lenin and Order of the Red Banner of Labor" School of Higher Technical Education im. N. E. Bauman), "Investigation of the process of tightening screw connections with mechanized tools".

Card 2/2

26230
S/103/61/022/009/011/014
D206/D304

16,8000 (1031, 1121, 1344)

AUTHOR: Pyshkin, I.V. (Moscow)

TITLE: Stability of a certain class of systems with step and periodically-varying parameters

PERIODICAL: Avtomatika i telemekhanika, v. 22, no. 9, 1961, 1244 -1247

TEXT: In the present article the author gives a method of analyzing the stability of a certain class of systems with step-periodically-varying parameters in the form of a compact characteristic equation. It is stated that the results obtained may be used for analyzing the stability of oscillations in systems containing simple straight lines - approximated non-linearities, in particular the saturation type linear control system can be described, in the absence of any input by a system of equations

$$\frac{d\varphi_k}{dt} = \sum_{\alpha=1}^{m} b_{k\alpha}(t)\,\varphi_\alpha \qquad (k = 1, 2, \ldots, m). \qquad (1)$$

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If the roots of these equations are a continuous number, the corresponding system is stable when the roots of the characteristic equation

$$\begin{vmatrix} \mu - b_{11} & -b_{12} & \dots & -b_{1m} \\ -b_{21} & \mu - b_{22} & \dots & -b_{2m} \\ \dots & \dots & \dots & \dots \\ -b_{m1} & -b_{m2} & \dots & \mu - b_{mm} \end{vmatrix} = 0 \qquad (2)$$

have negative real parts. The parameters of the system are assumed to vary either by step or periodically, i.e. the increase $\Delta b_{k\alpha}$ of any of the coefficients $b_{k\alpha}$ can be represented as a product of consecutive constant h_K and γ_α (k, μ = 1, 2, ... m). Then the system of differential equations (1) can be rewritten as

$$\frac{d\varphi_k}{dt} + \sum_{\alpha=1}^{m} b_{k\alpha}\varphi_\alpha + f(t)\, h_k \sum_{\alpha=1}^{m} \gamma_\alpha \varphi_\alpha \qquad (k = 1, 2, \dots, m), \qquad (5)$$

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Stability of a certain class ...

where

$$f(t) = \begin{cases} 0 \text{ for } nT < t < nT + T_1, \\ 1 \text{ for } nT + T_1 < t < nT + T. \end{cases} \quad (6)$$

It has been shown that the characteristic equation which solves the problem of stability of the system described by Eq. (5) at discrete instants 0, T, 2T has the form

$$\Delta(e^{pT}) = \begin{vmatrix} \frac{e^{pT} - e^{\mu_1 T_1 + \lambda_1 T_2}}{\mu_1 - \lambda_1} & \frac{e^{pT} - e^{\mu_2 T_1 + \lambda_1 T_2}}{\mu_2 - \lambda_1} & \cdots & \frac{e^{pT} - e^{\mu_m T_1 + \lambda_1 T_2}}{\mu_m - \lambda_1} \\ \frac{e^{pT} - e^{\mu_1 T_1 + \lambda_2 T_2}}{\mu_1 - \lambda_2} & \frac{e^{pT} - e^{\mu_2 T_1 + \lambda_2 T_2}}{\mu_2 - \lambda_2} & \cdots & \frac{e^{pT} - e^{\mu_m T_1 + \lambda_2 T_2}}{\mu_m - \lambda_2} \\ \cdots & \cdots & \cdots & \cdots \\ \frac{e^{pT} - e^{\mu_1 T_1 + \lambda_m T_2}}{\mu_1 - \lambda_m} & \frac{e^{pT} - e^{\mu_2 T_1 + \lambda_m T_2}}{\mu_2 - \lambda_m} & \cdots & \frac{e^{pT} - e^{\mu_m T_1 + \lambda_m T_2}}{\mu_m - \lambda_m} \end{vmatrix} = 0, \quad (7)$$

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Stability of a certain class ...

in which $\mu_1\mu_2$, ... μ_m roots of characteristic equation corresponding to the system of Eq. (1) for single valued parameters of to those of system Eq. (5) for $f(t) = 0$, i.e. the roots of Eq. (2); λ_1, λ_2, ... λ_m - the roots of characteristic equation corresponding to system (1) for other values of its parameters or to system (5) for $f(t) = 1$. The derivation of Eq. (7) is as follows: The system of Eqs. (5) is reduced to the canonical forms of A.L. Lur'ye at intervals $nT \leq t < nT + T_1$ and $nT + T_1 < t \leq nT + T$. By the method of adjusting the solutions of canonical equations within these intervals, taking into account the relationships between the canonical variables, a system of difference equations is found. These difference equations relate the coordinates of one of the canonical systems at discrete instants of time nT and $(n' + 1)T$. Eq. (7) is derived from the difference equations in the usual manner. For the system with variable parameters to be stable it is necessary that real parts of roots p_1, p_2, ... p_m of Eq. (7) be negative. If,

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therefore, the original system (1) with variable parameters can be reduced to that of Eq. (5) its stability can be analyzed by 1) Determining the roots of the characteristic equation of the system $\mu_1, \mu_2, \ldots \mu_m$ for one value of parameters only; 2) By determining the roots of the characteristic equation $\lambda_1, \lambda_2, \ldots \lambda_m$ for another value of parameters; 3) By substituting those values into (7) presented in the form of a determinant; 4) After opening the determinant, presenting the characteristic equation (7) in the form of a polynomial in e^{pT} and applying to it any of the stability criteria of pulsed systems as given by Ya.Z. Tsypkin(Ref. 5: Teoriya impulsnykh sistem (Theory of Pulsed System), Fizmatgiz, 1958). As an example, the stability of a system, consisting of one integrating and of one aperiodic element is analyzed. There are 2 figures, and 7 references: 5 Soviet-bloc and 2 non-Soviet-bloc. The references to the English-language publications read as follows: Edward O. Gilbert, A method for the symbolic representation and analysis of linear periodic feedback systems. Application and Industry, no. 46,

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S/103/61/022/009/011/014
D206/D304

Stability of a certain class ...

1960; G. Farmanfarma, General analysis and stability study of finite pulsed feedback systems. Application and Industry, no. 37, 1958.

SUBMITTED: December 30, 1960

Card 6/6

BAGDASAROV, Yu.Ye.; KAZACHKOVSKIY, O.D.; PINKHASIK, M.S.; PYSHIN, V.K.

Unsteady natural circulation in multistream systems of nuclear reactors. Atom.energ. 16 no. 5:407-413 My '64. (MIRA 17:5)

PYSHKIN, I. V.

28(1) P. 5 PHASE I BOOK EXPLOITATION SOV/2078

Akademiya nauk SSSR. Institut avtomatiki i telemekhaniki

Avtomatika i telemekhanika; sbornik (Automation and Telemechanics; Collection of Articles) Moscow, 1958. 144 p. 5,000 copies printed

Resp. Ed.: Ya.Z. Tsypkin; Ed. of Publishing House: V.A. Kotov; Tech. Ed: I.N. Guseva

PURPOSE: This collection of articles is intended for specialists in automation and remote control.

COVERAGE: The book contains fifteen papers presented at the fourth and fifth scientific and technical conferences, held in 1955 and 1956, by junior members of the staff of the Institut automatiki i telemekhaniki (Institute of Automation and Telemechanics), Academy of Sciences, USSR. The papers are based on the individual research of their authors. The collection consists of five parts: Automatic Control, Components of Automatic and

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Remote Control Systems, Automated Electric Drive, Automatic Checking, and Remote Control.

TABLE OF CONTENTS:

of individual components of the servo system. Then, through analysis of transient processes, he attempts to determine the shape of the correcting signal which must be reproduced by the stabilizing feedback. The introduction of this signal into the position servo system should provide conditions for a single switch-on, switch-off operation. This increase is determined by the minimum signal which operates the system. There are five Soviet references. No personalities are mentioned.

Pyshkin, I.V. Stability of Automatic Control Systems Equipped With a Key 21

The author describes three basic types of pulse-control systems and adds to these such systems in which the pulsing component is a key which periodically switches the feedback on and off. He finds the general form of the characteristic equation and the expression for the transient process caused by a jump-type signal in systems equipped with a key. This can be found when the roots of the characteristic equations

being obtained for the open and closed position of the key. A system of the first order with delay and which is unstable in both the closed and open conditions can always be stabilized through the introduction of a key and the increase of the feedback gain factor. This conclusion was confirmed by the author by investigations on a model. There are five Soviet references. No personalities are mentioned.

Sinitsin, A.S. A Device for Experimental Determination of Servo System Frequency Response Characteristics 29

The author explains two methods of determining the dynamic characteristics of automatic control systems: 1) by applying signals representing periodic time functions and 2) by applying random signals. The latter method has as yet found little use. The author employed the first method. He mentions a set of infralow-frequency equipment (lot-produced by the SAM Plant) but considers this equipment not entirely satisfactory for investigating servo systems, especially closed-cycle systems operating on a-c. He describes in detail an apparatus developed in 1954 at

IAT, Academy of Sciences, USSR, by which he was able to determine the frequency response characteristics of closed- and open-cycle servo systems. In these systems a-c or d-c voltage served as the input and output signals. The frequency range of the input signal was from 0.02 to 20cps. The author found that the apparatus ensures an accuracy of amplitude measurement of 1 to 2 per cent, of phasemeasurements within 1 degree and is sufficiently suitable for use. No personalities are mentioned. There are no references.

COMPONENTS OF AUTOMATIC AND REMOTE CONTROL SYSTEMS

Karibskiy, V.V. Principle of Operation of Magnetic Memory Devices (a Survey) 34

The author surveys existing types of magnetic storage devices and concentrates attention on ferrite core matrices, which he considers superior to all other known types. There are 10 references: 4 Soviet (including 1 translation), and 6 English. No personalities are mentioned.

describes some aspects of the work on investigating CRTs done at IAT in 1953-1954. The investigations showed that function generators based on dynamic compensation compare equally with those based on the static principle in regard to accuracy and speed of operation. However, the CRT component - the photomultiplier screen - becomes a source of drift and noise. Better results are obtained with a special CRT, having sealed shaped and receiving electrodes. There are 7 references, all Soviet, including 5 translations. No personalities are mentioned.

Electromagnetic Receivers of Frequency Signals With Coupled Vibrators 58

The author discusses the results obtained from investigating new electromechanical resonance components for audio frequencies. These components are characterized by the use of coupled vibrators, which permits approximating the selectivity characteristic of frequency signal receivers to an ideal rectangular shape. The characteristics obtained from experimental models of an electromechanical filter and frequency relay coincide fairly well

with the calculated and have steep slopes. This fact increases the noiseproof features of these components and reduces the effect of signal-level fluctuation on the band width. There are 15 references: 12 Soviet (including 1 translation), 2 English, and 1 German. No personalities are mentioned.

AUTOMATED ELECTRIC DRIVE

Petelin, D.P. Mechanical Transient Processes of a Synchronous Motor With Frequency Control 74

The author investigates the qualitative and quantitative characteristics of mechanical transients in synchronous motors with frequency control for conditions of starting, braking and speed regulation. In analyzing the processes of starting synchronous motors by means of changing the frequency of the a-c supply from zero, the process of starting at reduced frequencies and the process of motor acceleration by a smooth change of frequency were investigated separately. It was found that synchronous acceleration and braking depend on the rate of frequency change. The author forms equations and makes an

analysis of the free transient process of a synchronous generator-synchronous motor system. There are 11 references: 6 Soviet, 4 English and 1 German. No personalities are mentioned.

AUTOMATIC CHECKING

Mel'tser, L.V. Selection of Operating Conditions of a Phase Ionization Flowmeter 86

The author compares two kinds of ionization flowmeters, a pulse flowmeter and a phase flowmeter, both of which he describes in detail. He finds the latter to be more sensitive to current than the first because of the use of narrow-band amplifiers. In addition, a longer radiation time (trad) is usually selected for the phase flowmeter than for the pulse flowmeter, which contributes to better utilization of radiation. There are 5 references: 4 Soviet and 1 English. No personalities are mentioned.

Stakhovkiy, R.I. Causes of Instability of Gas Currents in an Analytical Mass Spectrometer and a Method of Periodic Automatic

The author presents experimental results of the practical application of periodic calibration in an experimental mass-spectrometer gas analyzer developed jointly by IAT and the Vsesoyuznyy nauchno-issledovatel'skiy i proyektnyy institut podzemnoy gazifikatsii ugley Ministerstva uglevoy promyshlennosti SSSR (All Union Scientific Research and Design Institute for the Underground Gasification of Coal, Ministry of the Coal Industry, USSR). Work on automatic calibration was begun at IAT in 1951 and is now being conducted in the USSR with good results but on a limited scale. The author also describes experiments on the quantitative determination of the effect of secondary electron emmission in the ionization chamber on gas current. The method of automatic periodic calibration is one of the measures used to increase the accuracy of mass-spectrometer gas analyzers, and the author recommends its application for industrial gas analyzers of this type. There are 8 references: 4 Soviet, 3 English and 1 German.

REMOTE CONTROL

in the communications channel, which will result in the smallest total error. The author uses the Kotel'nikov theorem for his discussion. There are 3 Soviet references. No personalities are mentioned.

The author discusses a method of synthesizing (1,k)-terminal networks with step switches, which is a generalization of the cascade method proposed by G.N. Povarov for synthesizing relay-contact(1,k)-terminal networks. Following G.N. Povarov, the author terms "cascade" connections those connections in which each output of the first multiterminal network is connected to one and only one input of the second multiterminal network. He presents an example of such synthesis. There are 8 references: 7 Soviet and 1 English.

The author presents a graphical variant of the cascade method, specially adapted for synthesizing symmetrical and related (1,k)-terminal networks. He considers the graphical method to be a much simpler one for engineering purposes than the analytical method, as applied to (1,k) terminal networks. He suggests its use for the synthesis of quasi-symmetrical contact circuits and contact circuits having one input and one or several outputs. There are 9 references: 7 Soviet, 1 Czech and 1 English.

Silayev, V.N. Remote Control System for Dispersed Objects 133

The author attempts to find a solution for a remote control system which would be simple in structure, use a small number of wires, with the smallest possible amount of relay equipment at each control point, a sufficiently large radius of action, and be flexible and reliable in operation. He discusses several methods used and concludes that application of the principle of "distributive selection" with a dispersed switch gives satisfactory results, as demonstrated in laboratory tests over a four-month period. There are 3 Soviet references. No per-

Automation SOV/2078

sonalities are mentioned.

AVAILABLE: Library of Congress

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JP/jb
11-20-59

PysHKin, I. V.

28(1) SOV/30-59-1-48/57

AUTHOR: Nevosnaev, I. S.

TITLE: Development of the Theory and the Application of Discreet Automatic Systems (Razvitiye teorii i primeneniy diskretnykh avtomaticheskikh sistem)

PERIODICAL: Vestnik Akademii nauk SSSR, 1959, Nr 1, pp 138-139 (USSR)

ABSTRACT: The conference dealing with this problem took place in Moscow from September 22 to 26, 1958 and was opened by V. A. Trapeznikov, chairman of the Natsional'nyy komitet SSSR po avtomaticheskomu upravleniyu (National Committee of the USSR for Automatic Control). In the Plenary Meeting Ya. Z. Tsypkin reported on discreet automatic systems and their development prospects. The work of the conference was undertaken by 5 sections. Reports were held by:
S. P. Tartakovskiy and V. P. Perov reported on new investigation results in the case of pulse systems with variable parameters.
Pan Ch'ung-wu dealt in his report with his successful procedures of analysis of pulse systems with several elements.
P. M. Kilin spoke about the problem of an increase of the perturbation stability of the systems.

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Ya. Z. Tsypkin investigated the possibilities of pulse systems.
A. A. Krasovskiy investigated one of the possible ways of constructing an automatic control system with a discreet correcting device.
R. A. Krogius analysed pulse systems.
[illegible] investigated the conditions of eigen oscillations (avtokolebaniye) in a system with wide range pulse modulation.
Yu. V. Dolgolenko reported on the method of determining parameters of a boundary cycle for an extreme system.
V. V. Kazakevich dealt with the results of approximation calculation methods of extreme systems.
A. A. Fel'dbaum investigated the influence of perturbations.
A. G. Butkovskiy and S. N. Domanitskiy reported on the construction of optimum control systems for objects with retardation.
[illegible] Nadshafova investigated methods of determining the maximum [illegible] effect of control systems.
O. G. Varshavskiy spoke about the construction of an automatic machine for objects with retardation which permits the best possible control systems.

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M. A. Gavrilov analysed modern telemechanical equipment from the viewpoint of the so-called "finite automatic machines" (consisting of systems of a finite number of elements).
P. P. Parkhomenko reported on the effect and construction of a special logical machine for the analysis of relay orders.
Yu. Ya. Bazilevskiy investigated accurate "finite automatic machines" which in the case of an unvariable structure furnish arbitrary items of several arguments.
G. K. Berends and [illegible] A. Tal' reported on a pneumatic system of elements of "finite automatic machines" with the logical elements described as "not", "and", "or" by means of which further logical functions can be put into practice.
The participants in the conference considered the technical working out of the papers presented to them insufficient. In the last session the heads of the committees summarized the results obtained at the conference and briefly mentioned the important tasks in further developing the theory and the application of discreet automatic systems.

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Pyshkin, I. V.

USSR

V Koumiss from cow skim milk. I. V. Pyshkin and Z. Sokolova. *Molochnaya Prom.* 16, No. 4, 33–4(1955).—Eighty parts of skim milk and 20 parts of water contg. 25% sugar are mixed together and pasteurized at 90–96° for 15 min. The resulting product is then inoculated with pure cultures of *Lactobacillus acidophilus* and *L. bulgaricus* (3–5%) at 45°. After 4–9 hrs. at 35–37°, when the acidity reaches 60–65 S-H° (0.0225 × 1° Soxhlet-Henkel = % lactic acid), the clotted milk is mixed and its particles broken down by pouring through cheese cloth. The mixt. is inoculated with alc.-fermenting yeast (bread and champagne) at 30°, and the fermented product is then bottled and held at 4–8°, depending on its acidity. II. A. Dmitrieva. *Ibid.* 34–5.—Essentially the same method was used to prepare high-quality koumiss from buttermilk. Vladimir N. Krukovsky

PYSHKIN, N.I.
CA

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Spot reactions for copper, mercury, and lead salts N. I. Pyshkin and O. M. Lukin. *Zhur. Anal. Khim.* 5, 319-20(1950).—To test for Cu a drop of aniline and a drop of soln. (neutral or alk.) are mixed on filter paper. A green color indicates the presence of Cu; Cd, Pb, and Bi do not interfere. Hg forms a dense white ppt. but does not interfere. The limiting concn. of Cu for this test is 1:40,000 and the min. detectable is 0.025 γ. To test for bivalent Cu sat. filter paper with a soln. of Aluminon in acetone and place a drop of tested soln. (neutral or acid) on it. A deep red color indicates the presence of Cu[illegible] Limiting concn. 1:20,000 detectable min. 0.05 γ. To test for **Hg sulfanilamide** is used with which it forms a white spongy ppt. Limiting concn. 1:2000, minimum detectable 0.2 γ. To test for Pb an acetone soln. of quinalizarin is used with which it produces a cherry colored or at small concns. a gray-blue ring. Limiting concn. 1:100,000, min. detectable 0.01 γ. M. Hosch

CA PYSHKIN, N.I.

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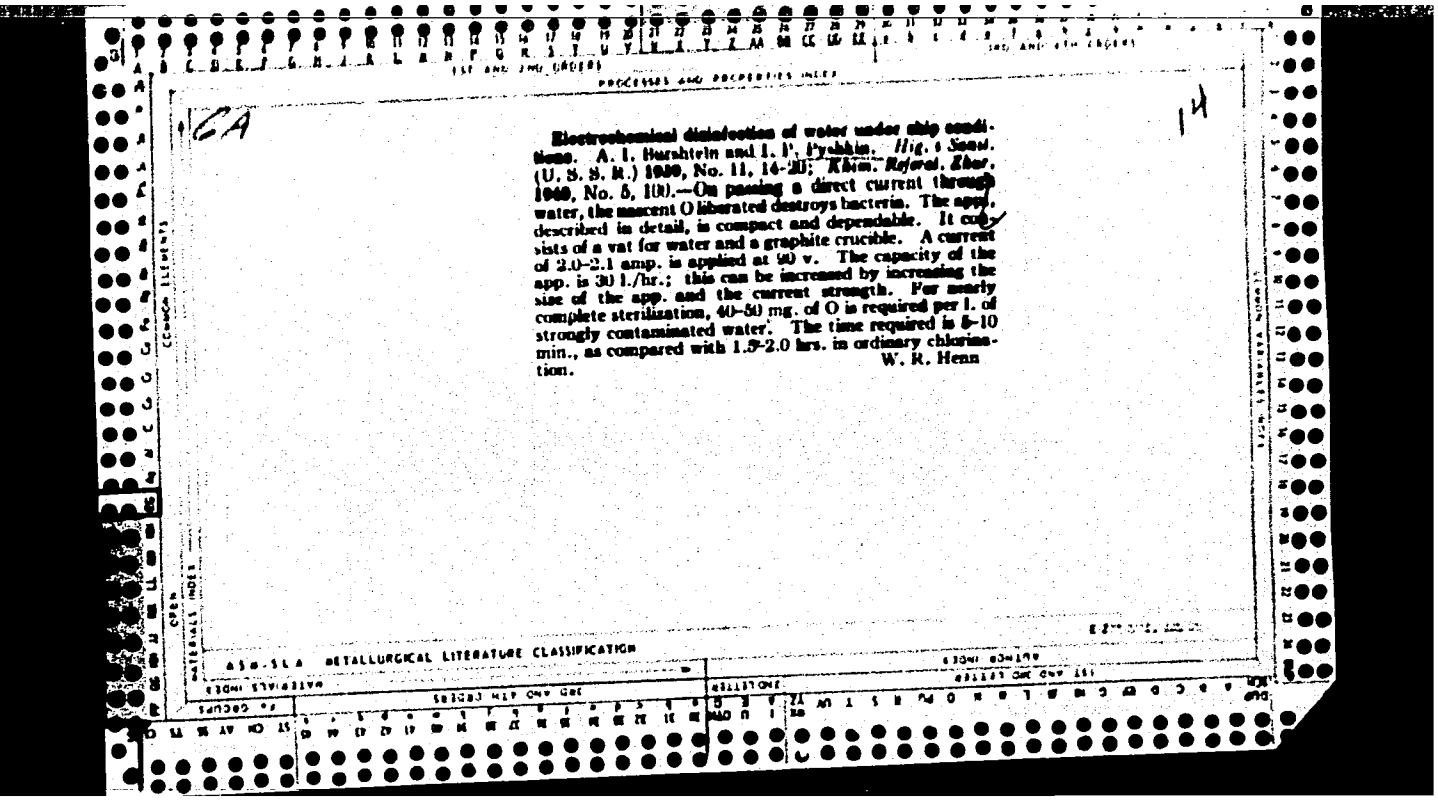
Indirect method of volumetric analysis. N. I. Pyshkin and O. M. Lukin (Moscow Polytech.). *Zhur. Anal. Khim.*, 6, 261(1951).—The indirect method, i.e. analysis without reagents, the constituents is applicable to any binary mixt. capable of liberating a gas upon suitable treatment, e.g., binary alloys, carbonates, nitrates, diazo compds., etc.

Let a mixt. of $A + B$ liberate V cc. of gas. If a similar wt. of A liberates V_A cc. of gas and a similar wt. of B liberates V_B cc., then the content of B in the mixt. is $X_B = (V_A - V)/(V_A - V_B)$ and A is found by difference. By A is designated the component liberating more gas. M. Hosch



CA

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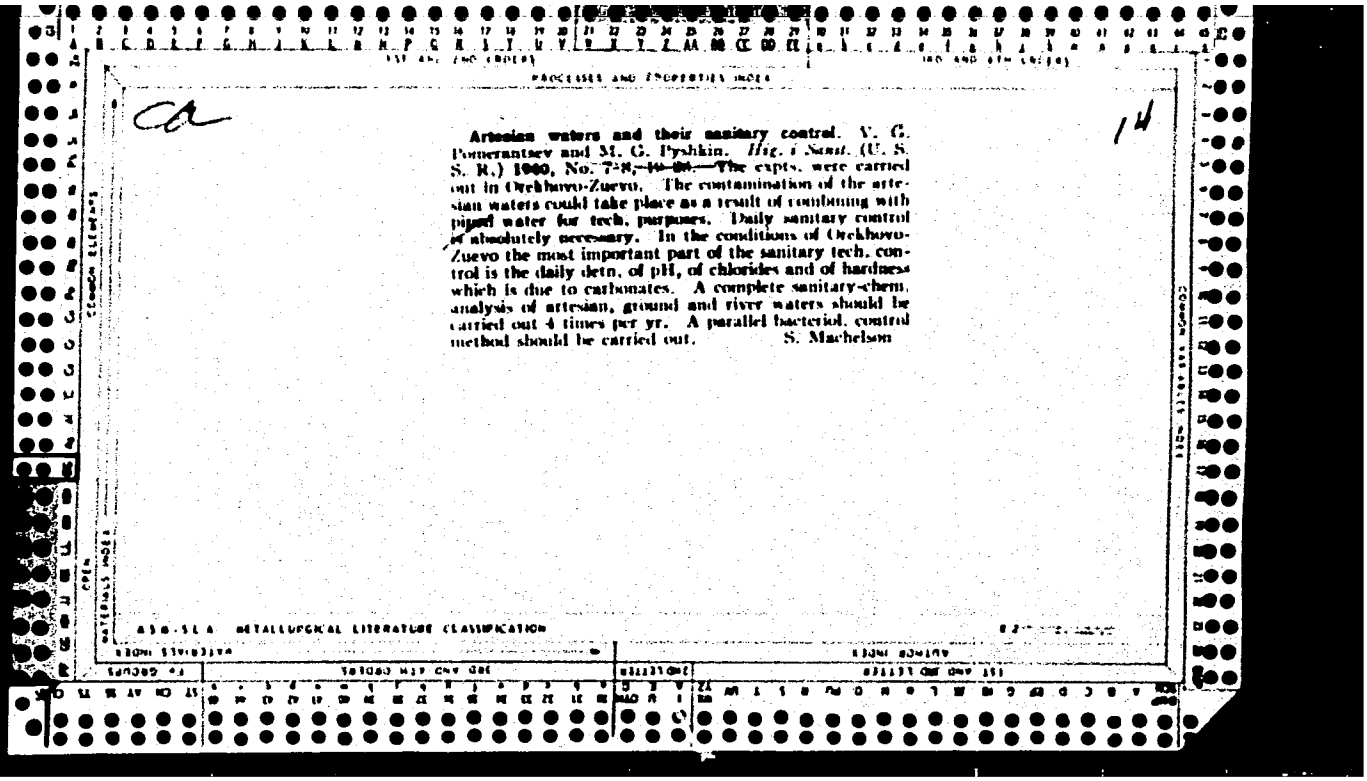
Electrochemical disinfection of water under ship conditions. A. I. Burshtein and I. V. Pyshkin. *Hig. i Sanit.* (U. S. S. R.) 1940, No. 11, 14-20; *Khim. Referat. Zhur.*, 1940, No. 5, 103.—On passing a direct current through water, the nascent O liberated destroys bacteria. The app., described in detail, is compact and dependable. It consists of a vat for water and a graphite crucible. A current of 2.0–2.1 amp. is applied at 50 v. The capacity of the app. is 30 l./hr.; this can be increased by increasing the size of the app. and the current strength. For nearly complete sterilization, 40–50 mg. of O is required per l. of strongly contaminated water. The time required is 5–10 min., as compared with 1.5–2.0 hrs. in ordinary chlorination.

W. R. Henn



Artesian waters and their sanitary control. V. G. Pomerantsev and M. G. Pyshkin. *Hig. i Sanit.* (U. S. S. R.) **1960**, No. 7-8, [illegible]—The expts. were carried out in Orekhovo-Zuevo. The contamination of the artesian waters could take place as a result of combining with piped water for tech. purposes. Daily sanitary control is absolutely necessary. In the conditions of Orekhovo-Zuevo the most important part of the sanitary tech. control is the daily detn. of pH, of chlorides and of hardness which is due to carbonates. A complete sanitary-chem. analysis of artesian, ground and river waters should be carried out 4 times per yr. A parallel bacteriol. control method should be carried out. S. Machelson

ACC NR: AR6030491 SOURCE CODE: UR/0275/66/000/006/B013/B013

AUTHOR: Pyshkin, S. L.; Radautsan, S. I.

TITLE: Effect of some processing factors upon the quality of GaP single crystals grown from a solution-melt

SOURCE: Ref. zh. Elektronika i yeye primeneniya, Abs. 6B87

REF SOURCE: Sb. Simpozium. Protsessy sinteza i rosta kristallov i plenok poluprovodnik. materialov, 1965. Tezisy dokl. Novosibirsk, 1965, 30-31

TOPIC TAGS: gallium ~~phosphide semiconductor~~ compound semiconductor research, phosphide, single crystal growing,

ABSTRACT: The effect of accuracy of furnace temperature control, crystal annealing in various media, and other processing factors upon the physical properties of produced crystals was investigated. With a temperature-control accuracy of ± 0.5C, within 50--1500C, better crystals were produced than with an accuracy of ± 5C. The crystals were up to 25 mm long and had a dislocation density of 1000 per cm^2. I.B. [Translation of abstract]

SUB CODE: 20

Card 1/1 UDC: 621.315:592:548.552:546.18'681

L 47222-66 EWA(1)/EWT(m)/T/EWP(t)/ETI IJP(c) JD/WH/JG/GG

ACC NR: AR6025751 SOURCE CODE: UR/0058/66/000/004/A074/A074

AUTHOR: Pyshkin, S. L.; Radautsan, S. I. 27 27

TITLE: Influence of certain technological factors on the quality of gallium phosphide crystals grown from a melt solution 41 B

SOURCE: Ref. zh. Fizika, Abs. 4A619

REF SOURCE: Sb. Simpozium. Protsessy sinteza i rosta kristallov i plenok poluprovodnik. materialov, 1965. Tezisy dokl. Novosibirsk, 1965, 30-31

TOPIC TAGS: gallium compound, phosphide, single crystal growing, temperature dependence, crystal dislocation

ABSTRACT: The study of the growth of GaP single crystals from the melt solution with apparatus which makes it possible to regulate the temperature with accuracy ±0.5C in the temperature interval 50 - 1500C has shown that when the regulation accuracy is increased the quality of the single crystal is appreciably improved. The crystals obtained have highly perfect cleavage planes, low dislocation density, and dimensions that are 2 - 3 times larger than for crystals obtained under analogous conditions, but with a regulation accuracy ±5°. The percentage of large crystals relative to the total number of obtained crystals is greatly increased. The crystals reach 25 mm in length and have a dislocation density 10^3 cm^{-2}. [Translation of abstract]

SUB CODE: 20

Card 1/1 mjc

L 08318-67 EWT(m)/EWP(w)/EWP(t)/ETI IJP(c) JD/JG

ACC NR: AR6033787 SOURCE CODE: UR/0058/66/000/007/E065/E065

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AUTHOR: Pyshkin, S. L.; Negreskul, V. V.

TITLE: Formation of solid solutions and some electric properties of gallium phosphide tellurides

SOURCE: Ref. zh. Fizika, Abs. 7E493

REF SOURCE: Sb. Materialy IV Konferentsii molodykh uchenykh Moldavii, 1964. Sekts. fiz.-matem. Kishinev, 1965, 29-32

TOPIC TAGS: solid solution, electric conductivity, telluride, gallium phosphide, alloy, single phase alloy fusing, Hall coefficient

ABSTRACT: Single phase alloys $(CaP)_{3x}-(Ga_2Tc_3)_{1-x}$ with x = 0.1 and x = 0.9 are obtained by the method of direct melting of the initial components. Electric conductivity and the Hall coefficient are determined as a function of temperature within the 300—600K range. V. Shevchenko. [Translation of abstract]

SUB CODE: 20/

Card 1/1 net

PYSHKIN, Viktor Petrovich, inzh.; KARABANOV, Sergey Aleksandrovich, inzh.; PONOMAREV, Vladimir Aleksandrovich, inzh.; FROLOV, K.P., inzh., red.; VOLKOV, P.N., red.; SAVEL'YEVA, Z.A., tekhn. red.

[Manual for the mechanic of a grain receiving station] Spravochnik mekhanika khlebopriemnogo punkta. Pod red. K.P. Frolova. Moskva, Zagotizdat, 1963. 243 p. (MIRA 16:9)
(Grain handling machinery)

PYSHKIN, V., povar, slushatel' kursov

Device for cutting vegetables into matchlike strips. Obshchestv.pit. no.2: 51-52 F '63. (MIRA 16:4)

1. Kursy po podgotovke vysokokvalifitsirovannykh kulinarov pri restorane "Leningrad", Moskva.
(Restaurants, lunchrooms, etc.--Equipment and supplies)

PYSHKIN, V.

Raise to a new and higher level the technological information and economic investigations. Muk.-elev. prom. 28 no.12: 23-24 D '62. (MIRA 16:1)

1. TSentral'nyy institut nauchno-tekhnicheskoy informatsii i tekhniko-ekonomicheskikh issledovaniy Gosudarstvennogo komiteta zagotovok Soveta Ministrov SSSR.
(Grain)

PYSHKIN, V.I., inzh. (Gor'kiy)

Advanced technology in the organization of local work on long haul distances. Zhel. dor. transp. 45 no.4:78-80 Ap '63. (MIRA 16:4)

(Railroads—Management)

BULEYEV, N.I.; VVEDENSKIY, V.N.; NAKHUTIN, I.Ye.; PYSHIN, V.K.

Calculating the temperature and capacity of an adsorbent in the presence of an internal heat source. Inzh.-fiz. zhur. 4 no. 5:8-11 My '61. (MIRA 14:5)

(Adsorption)

PYSHKIN, Petr Petrovich

[Accounting in municipal landscape gardening] Bukhgalterskii uchet v gorodskom zelenom stroitel'stve. Moskva, Izd-vo M-va kommun. khoz. RSFSR, 1960. 151 p. (MIRA 14:10)
(Landscape gardening--Accounting)

STROMBERG, A.G.; PYSHKINA, A.A.

Determination of admixtures in alloys and amalgams by means of amalgam polarography. Trudy Kom.anal.khim. 7:136-141 '56. (MLRA 9:9)

1.Ural'skiy gosudarstvennyy universitet imeni A.M.Gor'kogo, Kafedra fizicheskoy khimii, Sverdlovsk.
(Alloys) (Amalgams) (Polarography)

YEVSTIGNEYEVA, R.P.; PYSHKINA, G.N.; LEVANDA, O.G.; PREOBRAZHENSKIY, N.A.

Syntheses of ethyl and n-butyl esters of α-(β-carbomethoxyethyl)-β-methyllevulinic acid. Zhur.ob.khim. 33 no.6: 1839-1843 Je '63. (MIRA 16:7)

1. Moskovskiy institut tonkoy khimicheskoy tekhnologii imeni M.V.Lomonosova.

(Levulinic acid)

PYSHKINA, G. N.; YEVSTIGNEYEVA, R. P.; PREOBRAZHENSKIY, N. A.

Claisen condensation of esters of substituted levulinic acids.
Zhur. ob. khim. 32 no.12:3909-3913 D '62. (MIRA 16:1)

1. Moskovskiy institut tonkoy khimicheskoy tekhnologii imeni M. V. Lomonosova.

(Levulinic acid) (Claisen rearrangement)

KOBYL'SKAYA, M.V.; KORNILOV, M.F.; SEMENOV, S.S.; PYSHKINA, N.I.; PUSTOVALOVA, Ye.K.; KUZNETSOVA, O.A.; Prinimali uchastiye: KSENOFONTOVA, tekhnik; AYZENBERG, Z.M., tekhnik; LOBANOVA, E.M., tekhnik

Using acid asphalt for the preparation of superphosphate phosphorous fertilizer. Trudy VNIIT no.12:119-129 '63. (MIRA 18:11)

EL'PINER, I.Ye.; PYSHKINA, N.I.

Effect of ultrasonic waves on aqueous solutions of sodium carboxymethylcellulose. Vysokom. soed. 2 no.2:243-246 F '60.
(MIRA 13:11)

1. Institut biologicheskoy fiziki AN SSSR.
(Ultrasonic waves) (Cellulose)

GLADILINA, Ye.M.; ZAV'YALOV, V.G.; KOZLOV, N.N.; PETRUNIN, M.M.; PYSHKINA, N.I.; SEMENOV, S.S.

MS-25 lacquer on a base of the styrene-xylene fraction of a pyrolizate of chamber natural gasoline. Trudy VNIIT no.13: 31-37 '64. (MIRA 18:2)

KOBYL'SKAYA, M. V.; PYSHKINA, N. I.; SEMENOV, S. S.

Using xylene fractions of a pyrolytic product of the casinghead gasoline of compartment kilns. Trudy VNIIT no. 11:127-133 '62. (MIRA 17:5)

GULYAYEVA, L.I.; PYSHKINA, N.I.

Composition of the 180°-330° fractions of producer and tunnel tars of Baltic oil shales. Trudy VNIIPS no.4:137-151 '55.
(MIRA 13:4)

(Oil shales) (Tar)

GULYAYEVA, L.I.; PYSHKINA, N.I.

Studying the chemical composition of tar fraction produced in compartment kilns at 180°-300° C. Trudy VNIIPS no.5:217-224 '56. (MLRA 10:5)

(Tar)

PREYS, M.O.; PYSHKINA, N.I.; FEOFILOV, Ye.Ye.

Tendency of shale-tar oxygen compounds to undergo direct oxidation.
Trudy VNIIPS no.7:276-281 '59. (MIRA 12:9)
(Oil shales) (Oxidation)

KOBYL'SKAYA, M.V.; PYSHKINA, N.I.; SEMENOV, S.S.; KUZNETSOVA, O.A.

Improving the production of MS-25 alkyd-styrol lacquer.
Trudy VNIIT no.12:78-82 '63. (MIRA 18:11)

EL'PINER, I.Ye.; PYSHKINA, N.I.

Action of ultrasonic waves on synthetic polymers (anid G-669).
Vysokom. soed. 2 no.4:607-613 Ap '60. (MIRA 13:11)

1. Institut biologicheskoy fiziki AN SSSR.
(Ultrasonic waves) (Polyamides)

15-8107 21D9,2205

84518
S/190/60/002/004/020/020
B004/B056

AUTHORS: El'piner, I. Ye., Pyshkina, N. I.

TITLE: The Effect of Ultrasonics Upon Synthetic Polymers (Anid Γ-669 (G-669))

PERIODICAL: Vysokomolekulyarnyye soyedineniya, 1960, Vol. 2, No. 4, pp. 607 - 613

TEXT: The authors investigated the mixed polymer anid Γ-669 (G-669), which is soluble in ethanol, a polycondensation product of hexamethylendiamine with adipinic acid, azelaic acid, and caprolactam in the ratio of 1 : 1 : 2. Acoustic irradiation was carried out in a closed vessel at 740 kc/sec and an intensity of 15 w/cm^2. The piezo quartz lamella was fitted to the bottom of the vessel (Fig. 1). Before and after acoustic irradiation, the intrinsic viscosity, the molecular weight, and the propagation rate of ultrasonics was determined. For the purpose of determining the propagation rate of ultrasonics, a somewhat modified interferometer according to T. S. Velichkina, I. L. Fabelinskiy (Ref. 10),

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The Effect of Ultrasonics Upon Synthetic Polymers (Anid Г-669 (G-669))

was used, the wiring scheme of which with standard signal generator type ГСС-6 (GSS-6) is shown in Fig. 2, whereas the measuring chamber of the interferometer, in which the thickness of the liquid layer was exactly adjustable to 5μ, is shown in Fig. 3. The anid G-669 was dissolved in alcohol or in a mixture of alcohol and water, and was acoustically irradiated in the presence of air, hydrogen, helium or argon for 1 to 3 hours. In anid, dissolved in pure alcohol, neither a change in intrinsic viscosity, nor in the molecular weight and sound velocity occurred. When dissolved in water + alcohol = 1 : 3, anid, in the presence of hydrogen, showed a decrease of intrinsic viscosity, which did not occur in the presence of other gases (Table). Besides, the molecular weight in the presence of hydrogen increases to the 3- to 4-fold (Fig. 4), and the velocity of sound decreases. Thus, a ramification of the molecule is caused, which was confirmed by the change in the compressibility of the molecule, calculated according to the equation by Hazime Shiio (Refs. 13, 14) (Table 2). The compressibility increased from $3.3 \cdot 10^{-12}$/bar to 15.10^{-12}/bar. The ramification of the molecule is

Card 2/3

84518

The Effect of Ultrasonics Upon Synthetic Polymers (Anid Γ-669 (G-669))

S/190/60/002/004/020/020
B004/B056

explained by the authors by polycondensation on the lateral bonds, which is caused by activated hydrogen and by hydrogen molecules. The authors mention a paper by S. R. Rafikov, S. A. Pavlova, and B. L. Tsetlin (Ref. 12). There are 4 figures, 2 tables, and 14 references: 9 Soviet, 2 US, 1 French, and 2 German.

ASSOCIATION: Institut biologicheskoy fiziki AN SSSR (Institute of Biological Physics of the AS USSR)

SUBMITTED: January 21, 1960

Card 3/3

PYSHKINA N.I

PYSHKINA, N. I. --Cand Phys-Math Sci -- (diss) "Physical Changes in Natural and Synthetic Polymers Subjected to the Action of Ultrasound Waves," Moscow, 1960, 11 pp, 155 copies (Institute of Biological Physics, AS USSR. Acoustics Institute, AS USSR) (KL, 47/60, 97)

ZELENIN, N.I.; CHERNYSHEVA, K.B.; ANTROPYANSKAYA, Ye.A.; PYSHKINA, N.I.

Developing methods of cold fractionation of shale tar.
Report No.1. Khim. i tekh. gor. slan. i prod. ikh perer.
no.8:195-209 '60. (MIRA 15:2)
(Distillation, Fractional)
(Oil shales)

ZELENIN, N.I.; CHERNYSHEVA, K.B.; PYSHKINA, N.I.; ANTROPYANSKAYA, Ye.A.

Developing methods of cold fractionation of shale tar. Report No.3. Separation of phenols from light oil. Khim. i tekh. gor. slan. i prod. ikh perer. no.9:184-193 '60. (MIRA 15:6)
(Distillation, Fractional) (Oil shales) (Phenols)

S/672/62/000/011/007/011
D403/D307

AUTHORS: Kobyl'skaya, M. V., Pyshkina, N. I. and Semenov, S. S.

TITLE: On the problem of utilization of the xylene fractions of the pyrolysate of gaseous benzine from chamber furnaces

SOURCE: Leningrad. Vsesoyuznyy nauchno-issledovatel'skiy institut pererabotki i ispol'zovaniya topliva. Trudy. no. 11, 1962. Khimiya i tekhnologiya topliva i produktov yego pererabotki, 127-133

TEXT: The xylene fraction considered boils largely between 136 and 140°C, and contains 65 - 70% xylenes and ethylbenzene, and 20 - 30% styrene; the xylenes are: (o-xylene and PhEt 60 - 65%, m-xylene 20 - 25%, p-xylene 10 - 12%). The fraction cannot be used as a xylene mixture without prior removal of styrene, which is of interest in chemical industry, especially in the production of varnishes. The authors have therefore studied the possibilities of polymerizing styrene in the mixture and condensing it with maleic

Card 1/2

S/672/62/000/011/007/011
D403/D307

On the problem of ...

anhydride and alkyd resins. Studies on the preparation of varnishes were mostly carried out with the 120 - 150° xylene fraction. Polymerizations at 100°C with benzoyl peroxide and azobisisobutyrodinitrile, anh. $AlCl_3$ and H_2SO_4 were tried, distilling off the xylenes at the end of reaction. The reaction proceeded less readily than when pure styrene was polymerized in xylene under otherwise analogous conditions; under optimum conditions (72 hours at 100°C, with 0.5% of benzoyl peroxide) only ~36% of styrene was polymerized. The yields may be increased by concentrating the styrene prior to polymerization, and with the dinitrile initiator. $AlCl_3$ and H_2SO_4 initiators were unsuccessful. In further work, the authors tried to prepare an МС-25 (MS-25) type varnish from the xylene fraction and ФТП (FTP) alkyd base, at 140 - 150°C, over 30 - 72 hours. The optimum results were obtained at 150°C and 72 hours (76.6 - 80.7% of styrene reacted). The use of a wider (120 - 150°C) xylene fraction is recommended. There are 6 tables.

Card 2/2

EL'PINER, I.Ye.; PYSHKINA, N.I.

Propagation of ultrasonic waves in aqueous solutions of muscle proteins [with summary in English]. Biofizika 4 no.2:129-133 '59. (MIRA 12:4)

1. Institut biologicheskoy fiziki AN SSSR, Moskva.
(MUSCLE PROTEINS,
aqueous solution, ultrasonic wave velocity (Rus))
(ULTRASONICS,
velocity in aqueous solution of musc. proteins (Rus))

PYSHKO, I.K., mayor med.sluzhby; TSEY, E.D., mayor med.sluzhby

Treatment of osseous paronychia. Voen.-med. zhur. no. 2:57-58 F '61. (MIRA 14:2)

(FELON (DISEASE))

Pyshkov S.I.

PUCHKOV, N.G.; SEROV, A.V.; BELYANCHIKOV, G.P.; REZNIKOV, V.D.; PYSHKOV, S.I.

Suitavility for engines of diesel oils derived from sulfur crude oil. (MIRA 10:10)
Trudy VNII NP No.6:3-12 '57.
(Diesel fuels)

SKAZHENIK, O.K.; KUSHNIR, M.M.; PYSHNAYA, Ye.O.

Developing the method for the preparation of potassium nitrate. Prom. khim. reak. i osobo chist. veshch. no.1:6-7 '63. (MIRA 17:2)

PYSHNENKO, V.N.; PYSHNENKO, M.N.

Observations of Encke's comet (1961 I) in Khabarovsk. Biul. Inst. teor. astron. 9 no.9:624-625 '64. (MIRA 17:12)

1. Stantsiya nablyudeniya iskusstvennykh sputnikov Zemli, Vladivostok.

Pyshnenko, M.N.

PHASE I BOOK EXPLOITATION SOV/5011

Vsesoyuznoye astronomo-geodezicheskoye obshchestvo

Byulleten', no. 25 /32/ (Bulletin of the All-Union Astronomical and Geodetic Society, Nr 25 / 32/) Moscow, Izd-vo AN SSSR, 1959. 50 p. 1,500 copies printed.

Sponsoring Agency: Akademiya nauk SSSR.

Editorial Board: V.V. Fedynskiy (Resp. Ed.), N.S. Bobrov (Deputy Resp. Ed.), M.M. Dagayev, I.T. Kotkin, A.A. Isotov, P.F. Parenago, P.I. Popov, V.A. Bronshten (Scientific Secretary)

PURPOSE: This booklet is intended for astronomers and geophysicists.

COVERAGE: This is a collection of 14 articles on various questions in astronomy. Among the problems treated are: determining the age of lunar formation by analysing meteoritic crater distribution, atmospheric extinction in the observance of noctilucent clouds, star brilliance, solar cycles, meteor and comet studies. There is an article on the 12th Moscow Astronomical Olympiad competition for students of astronomy and geodesy. References accompany individual articles.

PYSHNENKO, V.N.; PYSHNENKO, M.N.

Observations of Encke's comet (1961 I) in Khabarovsk. Biul. Inst. teor. astron. 9 no.9:624-625 '64. (MIRA 17:12)

1. Stantsiya nablyudeniya iskusstvennykh sputnikov Zemli, Vladivostok.

Pyshnenko, V.N.

S/(1) PHASE I BOOK EXPLOITATION SOV/3011

Vsesoyuznoye astronomo-geodezicheskoye obshchestvo

Byulleten', no. 25 /32/ (Bulletin of the All-Union Astronomical and Geodetic Society, Nr 25 / 32/) Moscow, Izd-vo AN SSSR, 1959. 50 p. 1,500 copies printed.

Sponsoring Agency: Akademiya nauk SSSR.

Editorial Board: V V. Fedynskiy (Resp. Ed.), M.S. Bobrov (Deputy Resp. Ed.), M.M. Dagayev, I.T. Zotkin, A.A. Isotov, P.P. Parenago, P.I. Popov, Y.A. Bronshten (Scientific Secretary)

PURPOSE: This booklet is intended for astronomers and geophysicists.

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PYSHENENKO, V.N.; PYSHNENKO, M.N. (Khaberovsk)

Observations of Arend-Roland's and Mrkos' comets in 1957.
Biul.VAGO no.25:31-34 '59. (MIRA 13:3)
(Comets--1957)

PYSHENENKO, V.N.; PYSHNENKO, M.N. (Khabarovsk)

Observations of Arend-Roland's and Mrkos' comets in 1957.
Biul.VAGO no.25:31-34 '59. (MIRA 13:3)
(Comets--1957)

L 32926-65 EWT(1)/EWP(m) Pd-1

ACCESSION NR: AP5005617 S/0209/65/000/002/0023/0030

AUTHOR: Pyshnov, V. (Lieutenant general of engineering and technical service, Professor, Meritorious scientist of science and technology)

TITLE: Piloting an airplane by a constant pitch angle

14
B

SOURCE: Aviatsiya i kosmonavtika, no. 2, 1965, 23-30

TOPIC TAGS: flight theory, sweptback wing, experimental aeronautics, aerodynamic stability, aerodynamic profile

ABSTRACT: A study of flight dynamics and airplane stability reveals that control-

L 32926-65

ACCESSION NR: AP5005617

Enclosure). In fixed horizontal flight the resultant of the thrust and aerodynamic forces is vertical and balances the plane's weight. With engine failure the plane

ASSOCIATION: none
SUBMITTED: 00 ENCL: 01 SUB CODE: AC
NO REF SOV: 000 OTHER: 000
Card 2/3

L 32926-65
ACCESSION NR: AP5005617 ENCLOSURE: 01

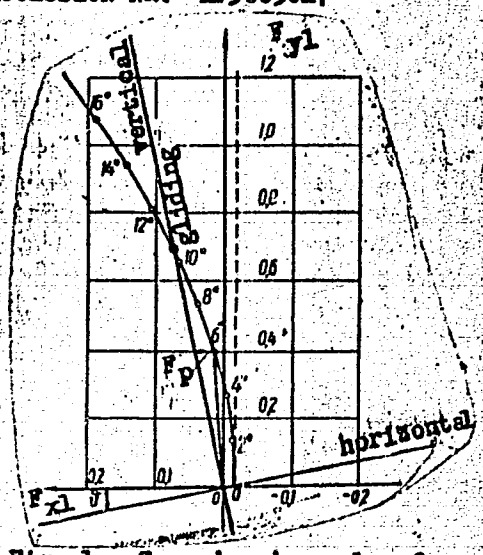

Fig. 1. Second order polar for an airplane

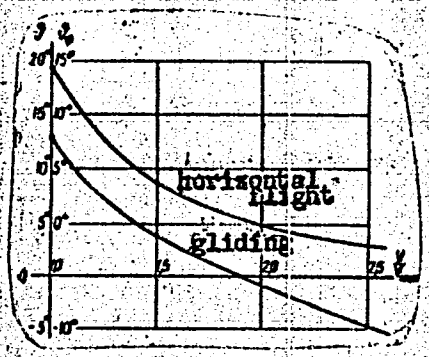

Fig. 2. Pitch angles in horizontal flight and in gliding

Card 3/3

ACC NR: AP6007300 SOURCE CODE: UR/0209/66/000/002/0066/0071

AUTHOR: Pyshnov, V. (Professor; Doctor of technical sciences; Lieutenant general of engineering and technical service)

ORG: none

TITLE: Air-cushion concept discussed

SOURCE: Aviatsiya i kosmonavtika, no. 2, 1966, 66-71

TOPIC TAGS: ground effect machine, helicopter, transportation system, annular nozzle, aerodynamic lift

ABSTRACT: Professor V. Pyshnov, a Lieutenant General of the Engineering and Technical Service and Doctor of Technical Sciences, in a comparative study of flight, discusses the air-cushion concept as applied to ground-effect machines. The principal formulas for calculating the operating characteristics of GEM's are discussed along with the performance parameters of GEM's and aircraft.

The lifting force of a rocket engine, a helicopter, and an airplane is expressed as a function of weight x exhaust-gas velocity, horsepower x rotor diameter, and horsepower x wing span, respectively. The effect of the proximity to the ground is negligible for airplanes, since it could be

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effective only at a very low flying altitude (h~0.2 to 0.1 of the wing span). The lifting force of a helicopter on the ground at h/D-values between 0.25—0.2 increases almost 50%. The ground effect is of particular value to overloaded helicopters. The operation of a GEM is based on the effect of a peripheral jet acting in the proximity of the ground.

The analysis shows that the formula derived for the lifting force of a GEM resembles that for a helicopter or airplane, except for the added parameters 1/L (1 = span; L = perimeter of the vehicle's base) and 1/h (h = hovering height). The value of 1/L depends on the shape of the base and the area enclosed within the peripheral nozzle; for most bases, which have a shape somewhere between a rectangle and an ellipse, this value can be taken as 0.25. For low hovering heights the effect of the h/l-values on the lifting force may be found from a table presented in the article. The flight depends on the parameter $G/(Nl)^{2/3}$ (where G is gross weight and N is power), which is the most significant parameter characterizing propeller-driven planes, helicopters, and GEM's. Its value ranges for airplanes between 7—8.5 and 9—10 if overloaded, and for heliocpters between 6 and 7; if over 8, the heliocpter cannot hover without benefit of the air-cushion effect. For a GEM its average value is 20.

As shown in Fig. 1, a GEM's hovering height can be increased by varying the shape of the nozzle: turning the edge of the nozzle inward, the flow leaving the nozzle produces increased lift. Considerable power is

ACC NR: AP6007300

required to lift a GEM to the height necessary over a rough terrain, although it is less than that required to fly a helicopter.

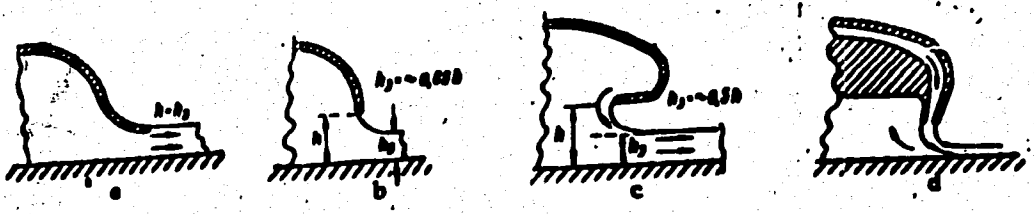

Fig. 1. The effect of nozzle shape on hovering height.

The GEM maneuvrability is quite poor. The required turning radius is $r = v^2/g \times G/P\sin\zeta$ (G = weight; P = thrust; ζ = angle of turn). At $P = 0.1 \times G$ and $\zeta = 15°$, $r = 0.4 \times v^2$; at v = 30 and 50 km/hr, r would be 28 m and 112 m, respectively. At v = 20 m/sec (initial speed), r would vary from 400 to 150 m, and the braking distance (without touching the ground) from 200 to 75 m. The drag coefficient of GEM's is given as 0.6—0.9. The economy of a vehicle as a means of transportation is characterized by the ratio of the weight of the vehicle to fuel consumption per km. For helicopters this value is 4,000—5,000 and for motor vehicles from 16,000 to 25,000. Orig. art. has: 5 figures, 11 formulas, 2 tables. [ATD PRESS: 4246]

SUB CODE: 01 / SUBM DATE: none

Card 3/3

PYSHNOV, Vladimir Sergeyevich

PYSHNOV, VLADIMIR SERGEYEVICH.

Voprosy pikirovaniia. (Tekhnika vozdushnogo flota, 1940, no. 9, p.75-85, diagrs.)
Title tr.: Problems of diving.

TL504.T4 1940

SO: Aeronautical Sciences and Aviation in the Soviet Union, Library of Congress, 1955.

PYSHNOV, Vladimir Sergeyevich

PYSHNOV, VLADIMIR SERGEYEVICH.

Voprosy posadki samoleta. (Tekhnika vozdushnogo flota, 1940, no.10-11, p.59-63, tables, diagrs.)
Title tr.: Problems of aircraft landing.

TL504.T4 1940

SO: Aeronautical Sciences and Aviation in the Soviet Union, Library of Congress, 1955.

PYSHNOV, VLADIMIR SERGEEVICH.

Koefitsient manevrennosti samoleta. (Tekhnika vozdushnogo flota, 1940, no. 12, p. 26-30, tables, diagrs.)

Title tr.: An aircraft maneuverability coefficient.

TL504.T4 1940

SO: Aeronautical Sciences and Aviation in the Soviet Union, Library of Congress, 1955

PYSHNOV, Vladimir Sergeevich

The aerodynamics of airplanes Moskva, Gos. izd-vo obor. promyshl., 1948. 436 p. (49-33918)

TL570.P9

PYSHNOV, VLADIMIR SERGEEVICH.

Koefitsienty dlia otsenki samoletov. (Tekhnika vozdushnogo flota, 1945, no.5, p. 1-5)

Title tr.: Factors in aircraft evaluation.

TL504.T4 1945

SO: Aeronautical Sciences and Aviation in the Soviet Union, Library of Congress, 1955.

PYSHNOV, V. S.

"Table Models for Investigation of Manuverability of Aircraft, Air Force Personnel," Vestnik Vozdushnogo Flota, No 17, Moscow, 1945.

PYSHNOV, V., general-leytenant inzhenerno-tekhnicheskoy sluzhby, zasluzhennyy deyatel' nauki i tekhniki, prof., doktor tekhn.nauk

Fuel consumption of rockets and space vehicles. Av.i kosm. 44 no.3:10-14 '62. (MIRA 15:3)
(Space vehicles--Propulsion systems) (Rockets (Aeronautics)--Fuel)

PYSHNOV, V., general-leytenant, prof., doktor tekhn.nauk, zasluzhennyy deyatel' nauki i tekhniki.

Eighteith anniversary of aviation. Av.i kosm. 45 no.7:54-59 '62. (MIRA 15:8)

(Aeronautics)

PYSHNOV, V.

Jul 1947

USSR/Aeronautics
Gyro Controls
Instruments, Gyro

"The Gyroscopic Effect," Prof V. Pyshnov, Lt Gen, Aviation Engineering Service of the USSR, 9 pp

"Vestnik Vozdushnogo Flota" No 7 (341)

The author discusses the result of gyroscopic effect on the plane and its use in control of the plane and its use in aviation instruments. Article is divided into the following sections: A general mechanical description of the gyroscopic effect, properties of a gyroscope, "persistance" of the gyroscope, the gyroscopic effect of the gyroscope, the gyroscope as a vertical indicator, and gyro compasses. 2275

Jul 1947

USSR/Aeronautics (Cont'd)
Gyro Controls
Instruments, Gyro

ence is made to the following articles in No 3 and 4, 1947: "The Mechanism of Blind Flying," "The Dynamics of Blind Flying."

2275

PYSHNOV, V.

Aug 1947

USSR/Aeronautics
Aircraft - Yak
Aircraft - Performance

"A. T. Stepanets' New Book 'How to Obtain Better Flying Data on the Yak Plane'," V. Pyshnov, Lt Gen, IAE, 1 p

"Vestnik Vozdushnogo Flota" No 8 (342)

Review of a book published in 1947 by the Ministry of the Armed Services of the USSR. Reviewer states that the author has set before himself the task of explaining in detail the various flight characteristics of the class of planes known as Yak. The book is well illustrated, but the illustrations are too complicated.

22724

USSR/Aeronautics (Contd)
Aug 1947
Aircraft - Yak
Aircraft - Performance

The phraseology of the book is cut and dried and the sentences are long and wordy. The reviewer concludes that the book fails in its objective as it does not explain fully enough the questions which the author sets before himself.

22724

PA 68T2

PYSHNOV, V.

Feb 1948

USSR/Aeronautics
Airplanes, Fighter
Airplanes, Bomber

"Development of Soviet Aviation Technology," Prof Lt Gen V. Pyshnov, Avn Engr Sv and Hon Worker of Sci and Tech, 11 pp

"Vest Vozdush Flota" No 2 (348)

Historical account of development of Soviet technology in field of aviation. Presents pictures of various Soviet airplanes, particularly pursuit and fighter planes and bombers.

68T2

PA 6ST4

PYSHNOV, V.

Apr 1948

USSR/Aeronautics
Flight, High Altitude
Atmosphere - Measurements

"Flight at High Altitudes," Prof Lt Gen V. Pyshnov, Avn Engr Sv, Hon Worker of Sci and Tech, 5 PP

"Vest Vozdush Flota" No 4 (350)

Various factors affect operational ceiling of aircraft. Pyshnov describes structure and composition of atmosphere at high altitudes, up to an altitude of 15 kilometers.

60T4

PYSHNOV, VLADIMIR SERGEEVICH

I. V. Ostoslavskii i V. M. Titov. Aerodinamicheskii raschet samoleta. (Sovetskaia kniga, 1948, no. 8, p. 44-45)

Review of the book by I. V. Ostoslavskii and V. M. Titov. "Aerodynamic design of aircraft."

Z2495.S67 1948

SO: Aeronautical Sciences and Aviation in the Soviet Union, Library of Congress, 1955.

PYSHNOV, V.S., zasluzhennyy deyatel' nauki i tekhniki; KOTLYAR, Ya.M., redaktor; PISKAREVA, N.N., tekhnicheskiy redaktor.

[Dynamic properties of the airplane; action of minor disturbances] Dinamicheskie svoistva samoleta deistvie malykh vozmushchenii. Moskva, Gos. izd-vo oboronnoi promyshl., 1951. 174 p. (MLRA 7:12)
(Airplanes)

VYSHNOV, V. S.

VETCHINKIN, VLADIMIR PETROVICH, 1888-1950

V. P. Vetchinkin. One of the founders of aerodynamics. Izv. AN SSSR Otd. tekh. nauk no. 5, 1952

Monthly List of Russian Accessions. Library of Congress. November 1952 UNCLASSIFIED

PYSHNOV, V. S

AID - P-46

Subject : USSR/Aeronautics

Card : 1/1

Author : Pyshnov, V., Lt. Gen. of the Engineering Technical Service, Professor

Title : Work of Zhukovskiy, N. Ye., on Aircraft Stability

Periodical : Vest. vozd. flota 3, 48 - 57, March 1954

Abstract : Zhukovskiy's works on aircraft stability, published from 1912 to 1950, are enumerated. A short review of his most important achievements follow. Seven diagrams.

Institution: None

Submitted : No date

PYSHNOV, V.S.

V.P.Vetchinkin and his contributions to the establishment of aerodynamic theories. Trudy po ist.tekh. no.4:44-51 '54. (MLRA 7:9)
(Vetchinkin, Vladimir Petrovich, 1888--1950) (Aerodynamics)

PYSHNOV, V.

AID P - 394

Subject : USSR/Aeronautics

Card 1/1 Pub. 135, 8/18

Author : Pyshnov, V., Lt. Gen. of the Technical Services, Professor

Title : N. Ye. Zhukovskiy's Work "The Flight of Birds" and its Importance in the Development of the Dynamics of Flight

Periodical : Vest. vozd. flota, 8, 41-48, Ag 1954

Abstract : A short analysis of an early work of Zhukovskiy. Works of other scientists who developed Zhukovskiy's theory are mentioned. Diagrams.

Institution : None

Submitted : No date

PYSHNOV, V.

AID P - 762

Subject : USSR/Aeronautics

Card 1/1 Pub. 135 - 8/15

Author : Pyshnov, V., Lt. Gen. of Engineering-Tech. Service, Prof.

Title : From piston engines to jet engines

Periodical : Vest. vozd. flota, 11, 46-56, N 1954

Abstract : The author takes under consideration weight, power, thrust, lifting and drag coefficients, speed, altitude, for piston engine and jet aircraft, and compares their characteristics. Graphs, formulae, etc.

Institution : None

Submitted : No date

Pyshnov, V.

AID P - 1057

Subject : USSR/Aeronautics

Card 1/1 Pub. 135 - 11/24

Author : Pyshnov, V., Prof., Lt. Gen. of Eng. Tech. Service (ITS)

Title : Supersonic aerodynamics

Periodical : Vest. vozd. flota, 1, 57-63, Ja 1955

Abstract : This is the first part of an article in which the author explains in a simple form the phenomena connected with the formation of waves, in an incompressible medium first and then in a compressible medium. Diagrams, formulae.

Institution : None

Submitted : No date

PYSHNOV, V.

AID P - 1849

Subject : USSR/Aeronautics

Card 1/2 Pub. 135 - 10/18

Author : Pyshnov, V., Lt. Gen. of the Tech. Serv., Prof.

Title : Supersonic aerodynamics

Periodical : Vest. voz. flota, 4, 52-58, Ap 1955

Abstract : This is the second article published under the above title. The first appeared in issue one of this journal in 1955. The second article is subdivided as follows: 2) compression and expansion waves, and 3) speed of the outflow of air. In the first part, the author analyses the formation of compression waves. He considers the variations of pressure and temperature at various subsonic and supersonic speeds and the formation of consecutive compression and expansion waves. In the second part, the author considers the relation of the pressure to the volume at adiabatic expansion,

AID P - 1849

Vest. voz. flota, 4, 52-58, Ap 1955

Card 2/2 Pub. 135 - 10/18

the motion of air molecules and the relation of speed and density to the pressure during the outflow of the air.

Institution: None

Submitted : No date

AID P - 1986

Subject : USSR/Aeronautics

Card 1/1 Pub. 135 - 10/20

Author : Pyshnov, V., Lt. Gen., Prof., Inst. of Tech. Service, [redacted]rker in Science and Technology

Title : The explanation of the dynamics of aircraft landing with side wind.

Periodical : Vest. voz. flota, 5, 58-62, My 1955

Abstract : The author considers the problem of side wind landing and critically reviews two articles which appeared in this journal in 1954, No.6 and No.8, 1954. He analyses the behaviour of the aircraft at slow speeds, shows the connection of the turn of the trajectory with the turn of the aircraft, and gives a diagram of side-wind landing.

Institution: None

Submitted : No date

AID P - 2209

Subject : USSR/Aerodynamics

Card 1/1 Pub. 135 - 10/18

Author : Pyshnov, V., Maj. Gen. of the Tech. Serv., Prof.

Title : Supersonic aerodynamics

Periodical : Vest. vozd. flota, 6, 51-58, Je 1955

Abstract : This is the fourth article of a series in which the author discusses the methods of formation of a supersonic flow. He gives diagrams of supersonic conduits and nozzles, and shows forces and reactions at the outlet from vessels. He gives graphical representation of the dependence of forces and reactions from the characteristics of the speed of the outlet.

Institution : None

Submitted : No date

PYSHNOV, V.

AID P - 2655

Subject : USSR/Aeronautics

Card 1/1 Pub. 135 - 10/17

Author : Pyshnov, V., Lt. Gen., Prof.

Title : Supersonic aerodynamics

Periodical : Vest. vozd. flota, 9, 59-64, S 1955

Abstract : This is the sixth article of a series in which the author discusses the special features of the rapid compression of gases and the process of reducing the speed of a gas flow. In particular, the author explains the formation of shock waves and discusses pressure, temperature and speed in supersonic gas flow. Formulae, diagrams, graph.

Institution : None

Submitted : No date

PYSHNOV, V.

AID P - 3148

Subject : USSR/Miscellaneous

Card 1/1 Pub. 135 - 10/20

Author : Pyshnov, V., Lt. Gen. of the Inst. of the Tech. Serv., Prof.

Title : Supersonic aerodynamics

Periodical : Vest. vozd. flota, 10, 53-58, O 1955

Abstract : This article belongs to the series of articles printed in this periodical (No. 1, 4, 6 and 9, 1955). Its subtitles are: "7. Calculation of the air flow speed" and 8. "Determination of the speed of a supersonic flow." The author describes the general method of measurement of static and dynamic pressure and gives a graphical representation of the interdependence of various values.

Institution : None

Submitted : No date